



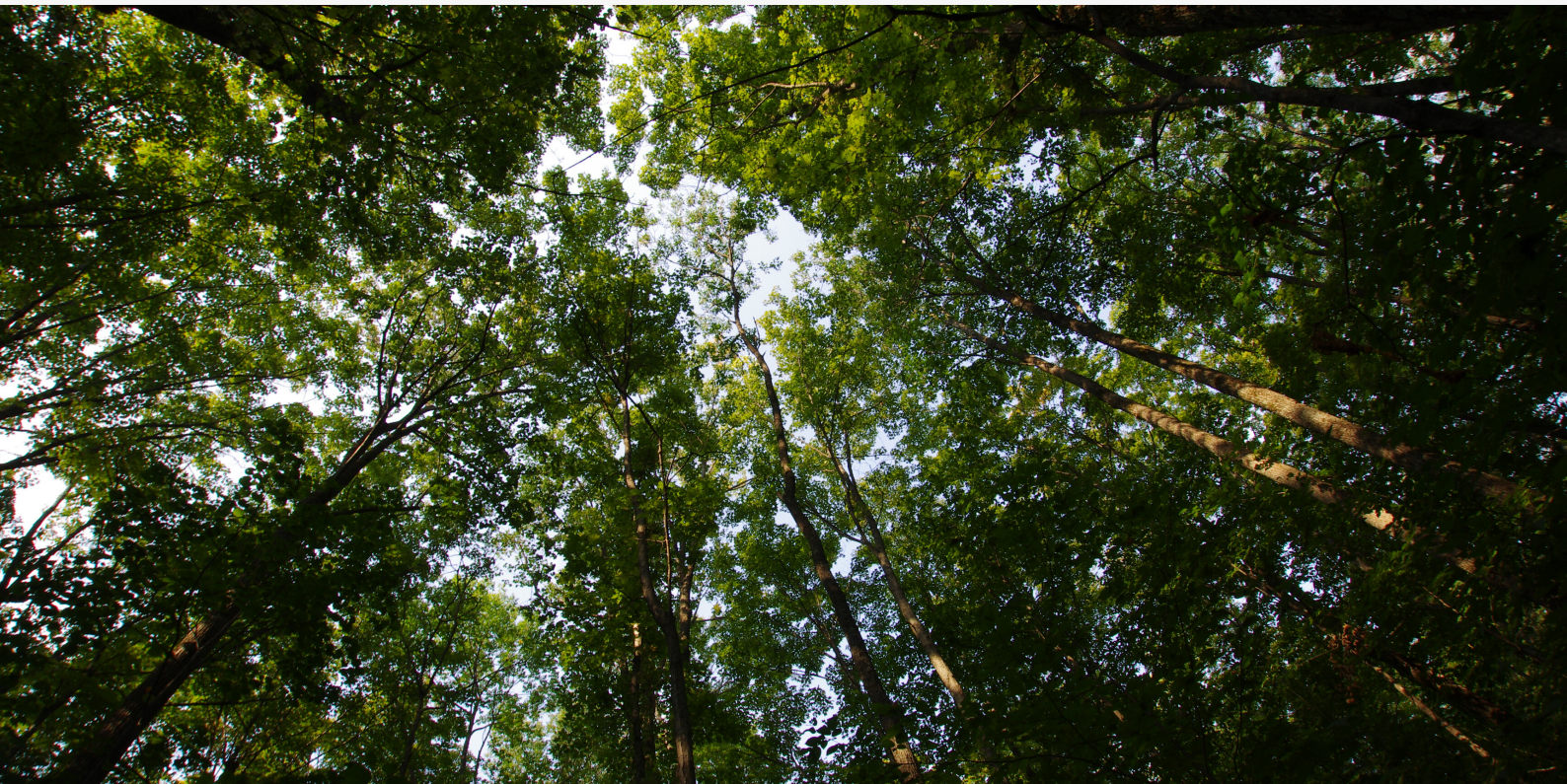
OUR INVESTMENT IN THE FUTURE OF AAAR

AMERICAN ASSOCIATION FOR AEROSOL RESEARCH

ENDOWMENT FUND ANNUAL REPORT 2018



MISSION



Dear Colleague,

The mission of the American Association for Aerosol Research Endowment Funds are to assist in advancing aerosol science and technology by providing stable, long-term financial support for the Association's programs. The goal is to establish and increase in net worth a set of funds that will provide significant financial support to aid in achieving AAAR's strategic objectives. The Endowment Funds are intended to complement AAAR's revenue from dues and other sources. This mission is enabled by the generous contributions of fellow colleagues and their families and friends. It is currently being realized by funding awards and plenary lectures.

AAAR endowment funds are invested in a blend of high quality stocks and bonds following the AAAR investment policy. The contributions and investment gains/losses are detailed in the table at the end of this report.

In 2018, AAAR hosted the International Aerosol Conference and therefore a total of \$36,584 was disbursed from the endowment funds. This included four AAAR awards and two international awards as well as support for the Friedlander Memorial Plenary Lecture via an honorarium and travel support.

I am also excited to share with you that two new funds were established in early 2019, the Presidents Fund to support an initiative by a President during their term and a fund to support the AS&T Outstanding Publication Award.

Further details about all these current funds and how they were used in 2018 can be found in the following pages. On behalf of the Endowment Committee, I am pleased to present this report and thank you for your generous contributions.

Sincerely yours,

Phil Hopke

Endowment Committee Chair

CURRENT ENDOWMENT FUNDS AND 2018 ACTIVITIES

THE AAAR ENDOWMENT FUNDS are comprised of sub-funds that are either **True Endowment Funds** or **Quasi Endowment Funds**. **True Endowment Funds** are established by a donor-restricted gift. The original value of gifts contributed to True Endowment Funds cannot be spent. The income and appreciation earned by True Endowment Funds provide a permanent source of expendable revenue in perpetuity for the purposes specified by the donor and agreed to by AAAR. **Quasi Endowment Funds** are created by donor gifts or by AAAR Board designation, and are treated the same as True Endowment Funds except that the original contributions can be spent in accord with the purpose of the fund and may have a finite lifetime. The AAAR Endowment Funds currently have two True Endowment Funds and six Quasi Endowment Funds.

TRUE ENDOWMENT FUNDS

- **Sheldon K. Friedlander Memorial Fund for Promoting Aerosols as an Enabling Discipline:** This fund was established in 2009 by the family of Sheldon Friedlander with a \$50,000 donation. Friends and colleagues contributed additional funds. **The goal of the fund is to provide for activities related to promoting aerosols as an enabling discipline, such as supporting plenary lectures and special symposia at the annual conference.**

The 2018 Friedlander Lecture entitled "Industrialization of Fine-Particle-Based "Products by Process" to Enable Demanding Customer Applications" was presented by **Yakov Kutsovsky** of the Cabot Corporation. *The Friedlander Memorial Fund was used to support his travel expenses.*

- **Fissan-Pui-TSI Award Fund:** This fund was established in 2005 with a \$75,000 donation from TSI Incorporated, which provided the award amount in 2006 and \$65,000 to support future awards. **The Award is granted by the International Aerosol Research Assembly (IARA) to recognize international collaboration in the field of aerosol science and technology between researchers/engineers residing on at least two different continents.**

The award is presented every four years at the International Aerosol Conference. In 2018 the Fissan-Pui-TSI Award was presented to **Philip Hopke** of Clarkson University and **Pentti Paatero** of the University of Helsinki. They were recognized for their collaborative work that lead to the development and dissemination of positive matrix factorization (PMF), which is now widely used as a tool for receptor modeling and data analysis in aerosol science.

QUASI ENDOWMENT FUNDS

- **Sheldon K. Friedlander Dissertation Award Fund:** Revenue from this fund supports the monetary prize for the Sheldon K. Friedlander Award which recognizes an outstanding dissertation by an individual who has recently earned a doctoral degree. The dissertation can be in any discipline in the physical, biomedical, or engineering sciences but must be in the field of aerosol science and technology. **The award memorializes Sheldon Friedlander for his leadership as a researcher, teacher, and pioneer in aerosol science.** One of AAAR's founders, Friedlander is a past recipient of the distinguished Fuchs Memorial Award. He directed graduate students at Columbia University, Johns Hopkins University, the California Institute of Technology, and the University of California for more than 50 years.

The 2018 Sheldon K. Friedlander Dissertation Award was presented to **Coty Jen** for her dissertation work at the University of Minnesota, which addressed the first steps of stable cluster formation by acid-base chemical nucleation.

ENDOWMENT COMMITTEE

The Endowment Committee oversees the management of the AAAR Endowment Funds and provides leadership for AAAR's philanthropy-based, long-term fundraising activities. The Committee is responsible for developing, reviewing, revising and implementing policies for fundraising, and making recommendations to the Board for the use of the funds to support AAAR's programs. The Committee develops philanthropy-based fundraising goals, spearheads fundraising activities and educates AAAR members as to the value of philanthropic giving to AAAR's Endowment Funds.

MEMBERS OF THE ENDOWMENT COMMITTEE

Philip Hopke (Chair)
2016-2019

Allen Robinson
2017-2018

Linsey Marr
2016-2018

David Ensor
2016-2019

Tyler Beck
2018-2019

Melissa Lunden
2017-2020

Susanne Hering
2018-2021

Leah Williams
2018-2020

Jim Smith
2018-2021

CURRENT ENDOWMENT FUNDS AND 2018 ACTIVITIES *(continued)*

"I am honored to join the ranks of previous Friedlander Award winners who are all fantastic role models as I start my career. Winning this award has also connected me with new colleagues that are helping me broaden my research interests to new and exciting fields."

Coty Jen
2018 Friedlander
Dissertation Award

"The Mercer award is unique in recognizing excellence in pharmaceutical aerosols and inhalable materials by peers from two different societies. Aerosol technology and its applications to health-related issues is a challenging path for many of us. It is a great honor and privilege to receive the award highlighting my career."

Chong Kim
2018 Thomas T. Mercer
Joint Award

► **Thomas T. Mercer Joint Prize Fund:** Sponsored by AAAR and the International Society for Aerosols in Medicine (ISAM), the Thomas T. Mercer Joint Prize recognizes excellence in the areas of pharmaceutical aerosols and inhalable materials. **The award honors the legacy of Thomas T. Mercer, an outstanding researcher and author whose work encompassed aerosol physics and chemistry as well as inhalation toxicology, industrial hygiene, and health physics.** The award is funded by contributions from the Mercer Family Foundation, as well as contributions from ISAM and revenue from this fund.

The 2018 Thomas T. Mercer Joint Prize was presented to **Chong S. Kim** at the Environmental Public Health Division National Health and Environmental Effects Research Laboratory at the U.S. Environmental Protection Agency for his numerous advances in the field of inhaled aerosol dosimetry.

► **David Sinclair Award Fund:** Revenue from this fund supports the David Sinclair Award which recognizes sustained excellence in aerosol research and technology by an established scientist still active in his/her career. The individual's research must have a lasting impact in aerosol science. **The award memorializes David Sinclair, one of aerosol science's great innovators, known for his knowledge, ingenuity and energy.**

The 2018 David Sinclair Award was presented to **Allen Goldstein** of the University of California - Berkeley for his substantial contributions in the field of atmospheric particulate matter that has led to numerous advances in our understanding of organic aerosols.

► **Kenneth T. Whitby Award Fund:** This fund supports the **Kenneth T. Whitby Award which recognizes outstanding technical contributions to aerosol science and technology by a young scientist.** The purpose of the award is to encourage continued work in the field and ongoing support of such endeavors. The award memorializes Kenneth T. Whitby, known for his contributions to aerosol measurement, the study of aerosol properties and behavior, and the nature of atmospheric aerosols.

The 2018 Kenneth T. Whitby Award was presented to **Chris Hogan** of the University of Minnesota for his outstanding contributions as an experimentalist, modeler, and theorist to the study of aerosol physics and chemistry.

► **Benjamin Y. H. Liu Award Fund:** This fund supports the **Benjamin Y. H. Liu Award which recognizes outstanding contributions to aerosol instrumentation and experimental techniques that have significantly advanced the science and technology of aerosols.** The award honors Benjamin Liu for his leadership in the aerosol community and his own seminal contributions to aerosol science through instrumentation and experimental research.

The Benjamin Y. H. Liu Award was not awarded in 2018.

► **Fuchs Memorial Award Fund:** The Fuchs Memorial Award is the premier international prize in aerosol science and is sponsored by AAAR, the Gesellschaft für Aerosolforschung (GAeF) and the Japan Association of Aerosol Science and Technology (JAAS). **This fund supports AAAR's contribution to the award.** Presented every four years at the International Aerosol Conference, the award memorializes Nikolai Albertovich Fuchs, the great Russian scientist who is regarded by many as the "father of aerosol science." The award recognizes outstanding worldwide contributions to the field of aerosol research.

In 2018 Fuchs Memorial Awards were presented to **Sotiris E. Pratsinis** from the Swiss Federal Institute of Technology (ETH Zurich) and **Pratim Biswas** from Washington University in St. Louis. Sotiris was recognized for his pioneering research on agglomerate-coalescence aerosol dynamics and for placing flame aerosol technology on a firm scientific basis for scalable synthesis of superior materials and devices. Pratim was honored for his pioneering innovative applications of aerosol science and engineering to several areas of societal interest, including his studies on new particle formation at high temperatures and his research that has helped improve the fundamental understanding of aerosol formation, growth, transport, and deposition.

FUNDS UNDER DEVELOPMENT

Presidents Fund: This fund was started in 2016 with a generous donation from David Ensor and has received a total of \$17,100 in donations. The Board of Directors voted to contribute matching funds to bring the Presidents Fund up to the amount of a True Endowment (\$50,000). The donors have decided that the Vice-President Elect will use the income from this fund to help support an activity they would like to help establish during their Presidency to further support the mission of AAAR. The Vice-President Elect will present their ideas during the Long-Range Planning Committee Meeting held each year at the Annual Conference.

"I am humbled with this honor that I cheerfully share with my supporting family, inspiring teachers, motivating students and patient sponsors and collaborators in industry and academia, worldwide."

Sotiris E. Pratsinis
2018 Fuchs Memorial Award

AS&T Outstanding Publication Award Fund: In Sept. 2018 Peter McMurry presented a proposal to the Board of Directors to create a fund to help support the AS&T Outstanding Publication Award. The Board approved the proposal, which included commitment of a generous donation by Peter and fundraising to reach the goal of \$25,000 and the Board of Directors agreeing to match the funds up to the amount of a True Endowment. Established in 2015, the AS&T Outstanding Publication Award is presented annually to recognize a paper published in Aerosol Science and Technology (AS&T) that has had a significant impact on the field.

In 2018 the AS&T Outstanding Publication Award was presented to **Peng Liu, Paul Ziemann, David B. Kittelson, and Peter McMurry** for their 1995 paper entitled "Generating Particle Beams of Controlled Dimensions and Divergence: I. Theory of Particle Motion in Aerodynamic Lenses and Nozzle Expansions."



"Receiving the David Sinclair award is a tremendous honor. This peer recognition for my contributions to aerosol research and technology while still active in my career is truly a lifetime highlight. It makes me even more motivated to continue contributing to our field and community, working towards reductions in aerosol pollution, and understanding the sources and processes controlling it."

Allen Goldstein
2018 Sinclair Award

BUILDING THE FUTURE



The Endowment Committee seeks to engage AAAR members, and their families and friends, in establishing and directing the future of the endowment. The AAAR Board has identified a number of useful activities that could be supported through the return from an endowment fund (listed in the table below). We welcome members' thoughts regarding these activities and any others that could make AAAR more effective in fostering and supporting aerosol science. Named funds to memorialize the legacy of prominent members of the aerosol community are a possibility as well.

Please send your ideas to Committee Chair
Phil Hopke at phopke@clarkson.edu

If you would like to help initiate any of these potential sub-funds or others of your choice, please let us know and, of course, we would welcome any contributions you wish to make. They can be directed to Bill Carney and clearly marked to which fund they should be credited.

**TABLE 1. IDEAS FOR POTENTIAL NEW
ENDOWMENT FUNDS TO SUPPORT AAAR'S
MISSION**

CONCEPT	ANNUAL SPENDING	ENDOWED AMOUNT*
STUDENT POSTER PRIZES, TO AWARD 10 AT \$200 EACH	\$2,000	\$50,000
EARLY CAREER TRAVEL GRANT TO COVER REGISTRATION, LODGING AND SOME TRAVEL	\$2,000	\$50,000
EARLY CAREER EVENT	\$2,000	\$50,000
PLENARY LECTURES (2) TO COVER HONORARIUM, LODGING AND SOME TRAVEL	\$4,000	\$100,000
STUDENT TRAVEL GRANTS, TO AWARD 20 AT \$500 EACH	\$10,000	\$250,000

*Endowed amount is based on assuming a 4% average rate of return on investments to support annual spending.

"It is extremely gratifying to have the collaboration we began at the 1990 AAAR meeting in Philadelphia recognized by the Fissan-Pui-TSI Award. The development and application of Positive Matrix Factorization (PMF) has opened many opportunities for quantitative data analyses to be made in a wide variety of fields starting with precipitation chemistry and particle composition data. We are glad that working together we have been able to help move the field of data analysis forward."

Philip K. Hopke and
Pentti Paatero
2018 Fissan-Pui-TSI
Award



STATUS OF FUNDS

AAAR ENDOWMENT FUNDS FINANCIAL SUMMARY FOR 2018

NAME OF ENDOWMENT FUND	NET ASSETS BEGINNING OF YEAR 1/1/2018 (AUDITED)	CONTRIBUTIONS + MATCHING FUNDS	TOTAL DISBURSED	NET RETURN (GAIN/LOSS + INTEREST - FEES)	NET ASSETS END OF YEAR 12/31/2018
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TRUE ENDOWMENT FUNDS (PERMANENTLY RESTRICTED CORPUS, REMAINDER TEMPORARILY RESTRICTED)

FRIEDLANDER MEMORIAL FUND (\$50,000 CORPUS)	\$103,709		\$1,803	-\$4,156	\$97,750
FISSAN-PUI-TSI AWARD FUND (\$65,000 CORPUS)	\$111,731		\$10,000	-\$4,914	\$96,817

QUASI ENDOWMENT FUNDS (BOARD DESIGNATED)

FRIEDLANDER DISSERTATION AWARD FUND	\$39,772		\$1,544	-\$1,590	\$36,638
THOMAS T. MERCER JOINT PRIZE FUND	\$47,223	\$9,000*	\$10,044	-\$1,974	\$35,205
DAVID SINCLAIR AWARD FUND	\$38,438		\$1,649	-\$1,555	\$35,234
KENNETH T. WHITBY AWARD FUND	\$37,075		\$1,544	-\$1,526	\$34,005
BENJAMIN Y. H. LIU AWARD FUND	\$40,231			-\$1,654	\$38,577
FUCHS MEMORIAL AWARD FUND	\$49,891	\$6,666*	\$10,000	-\$2,163	\$37,728

FUNDS UNDER DEVELOPMENT

PRESIDENTS FUND	\$17,100				\$17,100
AS&T OUTSTANDING PUBLICATION AWARD FUND		\$20,306			\$20,306

*CONTRIBUTIONS RECEIVED, BUT NOT DEPOSITED IN AWARD FUND

DONOR ACKNOWLEDGEMENT

WE WOULD LIKE TO FORMALLY THANK AND
RECOGNIZE THESE DONORS FOR THEIR
GENEROUS CONTRIBUTIONS AND SUPPORT
OF OUR NEW ENDOWMENT FUNDS.

PRESIDENTS FUND

Cliff Davidson
Jim Davis
Sheryl Ehrman
David Ensor
Rick Flagan
Susanne Hering
Philip Hopke
Pat Keady
Sonia Kreidenweis
William Nazaroff
Spyros Pandis
David Pui
John Seinfeld
David Shaw
Chris Sorensen
Barbara Turpin
Anthony Wexler
Ronald Wolff
Barbara Wyslouzil
Paul Ziemann

AS&T OUTSTANDING PUBLICATION AWARD FUND

David Ensor
Susanne Hering
Philip Hopke
Jingkun Jiang
Murray Johnston
Peter McMurry
Hans Moosmüller
Dan Murphy
Kihong Park
Mark Swihart
Jian Wang
Paul Ziemann
Anonymous

"The Fuchs Award is a great recognition by our global aerosol society and it will provide me a great impetus to continue doing more and using aerosol science to address several of the global challenge issues. I also look forward to popularizing the field of aerosol science and technology."

Pratim Biswas
2018 Fuchs Memorial Award